

What Is Claimed As New And Is Intended To Be Secured By Letters Patent Is:

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1. A process for the hydrogenation of acetone, which comprises:
conducting the liquid-phase hydrogenation of acetone in at least two hydrogenation
process stages, thereby preparing isopropanol product.

5 2. The process as claimed in claim 1, wherein the liquid-phase hydrogenation in a first
stage is conducted at a temperature of 60 to 140°C and a pressure of 20 to 50 bar.

3. The process as claimed in claim 1, wherein, in the product isopropanol which is
formed, the total concentration of the by-products which are formed does not exceed 300 ppm.

10 4. The process as claimed in claim 1, wherein the acetone to be hydrogenated has a water
content of less than or equal to 1.0% by weight.

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5. The process as claimed in claim 4, wherein the acetone to be hydrogenated has a water
content of less than or equal to 0.5% by weight.

6. The process as claimed in claim 5, wherein the acetone to be hydrogenated has a water
content of less than or equal to 0.2% by weight.

7. The process as claimed in claim 1, wherein the liquid-phase hydrogenation reaction is conducted in the presence of a nickel containing catalyst on a neutral support.

8. The process as claimed in claim 7, wherein said neutral support is α -Al₂O₃.

9. The process as claimed in claim 2, wherein the liquid-phase hydrogenation is conducted at a temperature of 70 to 130°C, and a pressure of 25 to 35 bar.

10. The process as claimed in claim 1, wherein the liquid-phase hydrogenation in a second stage is conducted at a temperature of 60 to 140°C, and a pressure ranging from 20 to 50 bar. 70 to 130°C.

11. The process as claimed in claim 10, wherein the liquid-phase hydrogenation is conducted at a temperature of 70 to 130°C.

12. The process as claimed in claim 1, wherein the hydrogenation is conducted at a molar ratio of hydrogen to acetone ranging from 1.5:1 to 1:1.

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